

Begin

REEL # 233

KLYAVIN'SN, YA. YA.
to

KLYAVIN'SH, Ya.Ya. [Klavins, J.J.]

Intensiveness : forest drainage in the Latvian S.S.R. Truly Inst. less
49:69-74 '59. (MIRA 13:2)

1. Lesomelioratiivnyy proyektno-isyskatel'skiy otdel latgiprovedkhosa.
(Lat --Drainage) (Latvia--Forests and forestry)

BUSE, Kasper Krishevich; [Buks, Kaspars]; KLYAVIN'SH, Yanis Yanovich
[Klavins, Jānis]; MAYKE, Pavel Martynovich; NABO, Yevgeniy
Dyul'yevich; TILPAT'YEVSKIY, M.P., retsentsent; PORITSKIY, M.A.,
red.; TIKHONOVA, N.V., red.isd-va; KUZNETSOVA, A.I., tekhn.red.

[Practices of the Latvian S.S.R. in the drainage of forest soils]
Osushenie lesnykh zemel'; iz opyta raboty v Letviskoi SSR.
Moskva, Goslesbumizdat, 1960. 159 p. (MIRA 14:1)
(Latvia--Forest soils) (Latvia--Drainage)

ODIN', Ya. [Odins, J.]; BUSH, K. [Buss, K.]; KLYAVIN, S. Ya. [Klavins, J.];
MAYKE, P. [Maikē, P.]; GRUZIS, A., kand. sel'khoz. nauk, retsenzēt;
OZOLIN, K. [Ozolins, K.], inzh., lesokhoz., retsenzēt; LIELPETERS, P.,
red.; KRASOVSKA, M., tekhn. red.

[Drainage of forests] Mezū nosusināšana. By J. Odins. and others.
Rīga, Latvijas Valsts izdevniecība, 1960. 282 p. [In Latvian]
(Latvia—Forests and forestry) (Drainage) (MIRA 14:12)

ACCESSION NR: AT4042300

8/0000/63/003/000/0229/0241

AUTHOR: Klyavinya, A.P.

TITLE: The occurrence of back magnetomotive force (back-m.m.f.) in conduction pumps with series excitation

SOURCE: Soveshchaniye po teoreticheskoy i prikladnoy magnitnoy gidrodinamike. 3d, Riga, 1962. Voprosy* magnitnoy gidrodinamiki (Problems in magnetic hydrodynamics); doklady* soveshchaniya, v. 3. Riga, Izd-vo AN LatSSR, 1963, 229-241

TOPIC TAGS: conduction pump, series excitation, magnetomotive force, back magnetomotive force

ABSTRACT: This article reports the results of an investigation into the occurrence of back-m.m.f. in DC pumps with series excitation. The nature of the phenomenon of back-m.m.f. is explained in detail. It is noted that the current in the pumps under discussion is not completely used to give rise to a magnetic field. The distribution of the current is such that the current lines form figures reminiscent of loops, similar to the current line ABA, in Figure 2, a of the Enclosure. If, instead of the actual form of the center current line, the idealized line represented in Figure 2, b is considered, it can

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be seen that over the segment DD_1 the movement of the current leads to a certain demagnetizing of the core; thus, the actually "effective" number of turns in the pump (See Figure 1 of the Enclosure) is less than one. The reduction of the effective m.m.f. can be regarded as the occurrence of a corresponding back-m.m.f., and is introduced into the calculation by means of the "effective" number of turns w . In this article, experiments are described in which back-m.m.f. was studied in two versions: with a copper bar used to magnetize a C-shaped core, and with an electrolytic bath, in which a study was made of the distribution of the current lines. Formulas are derived for the simplified case in which the thickness of the bar is uniform. It is evident from Fig. 2a that the current travels in the channel at a certain angle to the y axis, with the pressure created only by the y component of the current. The reduction of the pressure, caused by this circumstance, is taken into consideration in this article by the factor k_1 , which is equal to the ratio of the actual pressure to the pressure which would develop if the current travelled in the direction of the y axis (according to Figure 2, b) and the induction remained as before. The reduction in induction is characterized by the factor $k_B = \frac{B}{B_0}$.

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where B is the actual mean value of the induction in the gap, and B_0 is the induction which would occur if the effect of the generation of back-m.m.f. were absent. In this article, primary attention is directed at this factor (k_p). The author notes that the factors considered in this paper are such that the proposed formulas and curves constitute only a first approximation, suitable for the computation of the occurrence of the back-m.m.f. used in conduction pump calculations. "A.K. Bushman called our attention to the possible existence of this effect." The work was carried out under the guidance of Yu. A. Birzvalk (Cand. Tech. Sci.). Orig. art. has: 5 formulas and 14 figures.

ASSOCIATION: none

SUBMITTED: 04Dec63

ENCL: 02

SUB CODE: IE, EM

NO REF SOV: 000

OTHER: 000

Card 3/5

КЛЕВАН, И. Ю.

PALAMARCHUK, M.D.; USHAKOV, A.F.; KLYAVIN, I. Yu.; KITATTSNYA, Z.P.

New means for the mechanical harvesting and hauling of sugar beets.
(Combines (Agricultural machinery)) (Sugar beets--Transportation)
(MIRA 8:11)

FRIDMAN, S.Ye.; DONCHAK, A.S.; KLYAVIR, I.Yu.

Obryvko best stacker-unloader and rake-type best loader. Sakh.prom.
30 no.7:50-54 J1 '56. (MIRA 9:11)

1. Rosglavsakhar (for Fridman and Donchak); 2. Vsesoyuznyy
nauchno-issledovatel'skiy institut svekly (for Klyavir).
(Sugar industry--Equipment and supplies)

KLYAVIR, I., nauchnyy sotrudnik; PENTRENKO, N., inzh.

Semicontinuous method of harvesting beets is most efficient.
Nauka i pered. op. v sel'khoz. 8 no.10:13-15 O '58. (MIRA 11:11)
(Sugar beets—Harvesting)

OLYAVIR, I. Yu.
KUTSAK, I.M. agronom; ZELINSKIY, A.A. [Zelins'kiy, A.A.]; SHAPOVALOV, P.F.;
OLYAVIR, I. Yu.

Over-all mechanization of sugar beet growing. Mekh. sil'. hosp. 9
no.1:18-21 Ja '58. (NIRA 11:2)

1. Kolgosp im. Chapayeva, Zhashkivs'kogo rayonu, Cherkas'koi oblasti
(for Kutsak), 2. Vsesoyuzniy nauchno-dosledniy institut tsukrovikh
buryakiv (for Zelins'kiy, Shapovalov, Olyavir).
(Sugar beets) (Agricultural machinery)

KLYAVIR, I.Yu.[Klavir, I.Yu.], nauchni pratsivnik,; ZELINSKIY, A.A.
[Zelins'kiy, A.A.], nauchni pratsivnik

Introduce semi-continuous flow-line harvesting of beets. Mekh. sil'.
hosp. 9 no. 8:21-23 Apr '58. (MIRA 11:8)

1. Vsesoyuzniy nauchno-doslidniy institut tsukrovikh buryativ.
(Sugar beets--Harvesting)
(Sugar beets--Transportation)

USHAKOV, O.F. nauchnyy rabotnik; KLYAVIR, I.Yu., [Kliavir, I.IU.], nauchnyy rabotnik

Problems of growing monospermous sugar beets. Mekh. sil' hosp.
10 no.4:25 Ap '59. (MIRA 12:6)

1.Vsesoyuznyy nauchno-issledovatel'skiy institut sakharney svakly.
(Sugar beets)

USHAKOV, O.F., kand.tekhn.nauk; KLYAVIR, I.Yu., kand.tekhn.nauk

Characteristics of the work of beet combines under the new
method of sugar beet growing. Mekh. sil'. hosp. 12
no.9:16-17 8 '61. (MIRA 14:11)
(Sugar beets--Harvesting)

USHAKOV, Aleksandr Fedorovich; ~~KLIVIR, Isidor-Far'yevich~~
[Kliavir, I.IU.]; SINEGUB, S.I. [Syn'ohub, S.I.], red.;
GULENKO, O.I. [Hulenko, O.I.], tekhn. red.

[Over-all mechanization of growing sugar beets] Kompleksnaia
mekhanisatsiia v buriaktivnytstvi. 2., perer. i dop. vyd.
Kyiv, Derzhsil'hospydav URSR, 1962. 229 p. (MIRA 14:4)
(Ukraine--Sugar beets)
(Ukraine--Agricultural machinery)

KLYAVZUNIK, I.Z., aspirant

Combined action of some pharmacological substances used in anesthesiology. Zdrav. Belor. 5 no.11:30-33 N '59. (MIRA 13:3)

1. Kafedra propedevticheskoj khirurgii (zaveduyushchiy - prof. A.S. Rovnov) i kafedra farmakologii (zaveduyushchiy - prof. I.S. Shadurskiy).

(ANESTHESIOLOGY)

KLYAVZUNIK, I.I.

Aminazine, dimedrol, promedol, diplatsin, and sodium thiopental
in combined methods of anesthesia. Zdrav. Belor. 6 no.3:34-39
Mr '60. (MIRA 13:5)

1. Kafedra farmakologii (sveduyushchiy - prof. K.S. Shadurskiy),
i kafedra obshchey khirurgii Minskogo meditsinskogo instituta
(sveduyushchiy - professor A.S. Rovnov).
(ANESTHESIA)

KLYAVZUNIK, I.Z.; PRISTUPA, Ch.V.; KAPUTSKIY, F.M.; YEFIMENKO, I.N.
[Brezhenko, I.N.]

Experimental study of cartocymethylcellulose. Vestsi AN
BSSR. Ser. biol. nav. no.1:133-134 '64. (MIRA 17:6)

KRASIL'NIKOV, A.P.; IZRAITEL', N.A.; KRYLOV, I.A.; KLYAVZUNIK, N.Yu.

Reaction of passive hemagglutination in the diagnosis of
scleroma. Lab. dolo no.9:537-539 '64. (MIRA 17:12)

1. Kafedra mikrobiologii (sveduyushchiy -- dotsent A.P.
Krasil'nikov) Minskogo meditsinskogo instituta.

KLYAYEV, V.I.; SLISARENKO, P.A.; FINKEL'SHTEYN, A.V.

Polarographic determination of acetaldehyde in the presence of
acrylonitrile. Zhur.anal.khim. 18 no.8:999-1002 Ag '63.

(MIRA 16:12)

1, Saratov Pedagogical Institute.

KLYAYEV, V.I.; GRYAZEV, N.M.; SLISARENKO, F.A.

Complex study of the structure of some natural disperse systems
with an "elastic" skeleton. Dokl. AN SSSR 164 no.1:134-136
S '65, (MIRA 18,9)

1. Saratovskiy gosudarstvennyy pedagogicheskiy institut i
Saratovskiy politekhnicheskiy institut. Submitted February
26, 1965.

SIISARENKO, F.A.; ZABELIN, V.A.; TIMOFEYeva Y.M.; KLIATYEV, V.I.

Complex study of the physicochemical and scriptive properties
of Volga Valley gaise. Zhur.prikl.khim. 38 no.11:2430-2439
N 165.
(MIRA 18112)

1. Saratovskiy gosudarstvennyy pedagogicheskiy institut.
Submitted November 2, 1963.

KLYAYEV, V.I.; SLISARENKO, P.A.

Evaluating the adsorption capacity of certain tripoline type
clays in the Volga Valley by water and benzene. Izv.vys.ucheb.
sav.; khim.i khim.tekh. 7 no.6:1021-1024 '64.

1. Saratovskiy gosudarstvennyy pedagogicheskiy institut, kafedra
khimii. (MIRA 18:5)

VASIL'YKV, V.S.; ZABELIN, V.A.; KLYAYEV, V.I.; SLISARENKO, F.A.

Mineral composition of the lower part of Maastricht sediments in the Saratov region. Dokl. AN SSSR 158 no.5:1096-1098 0 '64.

(MIRA 17:10)

1. Saratovskiy gosudarstvennyy universitet im. N.G.Chernyshevskogo i Saratovskiy gosudarstvennyy pedagogicheskiy institut. Predstavleno akademikom N.M.Strakhovym.

KLYAYMAN, B.I., inzh.

Work practices in an electric equipment repair shop. Prom.
energ. 21 no. 1:28-29 Ja '66 (MIRA 19:1)

"APPROVED FOR RELEASE: 06/19/2000

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SUBMITTED: 21 FEB 64

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KLYAZNIK, V. A.
Radiophysics

Dissertation: "Increasing the Interference Rejection of Radio Reception by Means of Compensation for the Harmful Action of Pulse Interference in the Receiver." Cand Tech Sci, Moscow Electrical Engineering Inst of Communications, Moscow, 1953. (Referativnyy Zhurnal -- Fizika Moscow, Mar 54)

SO: SUM 213, 20 Sep 1954

KLYAZNIK V. [A.]

USSR/ Electronics - Radio

Card 1/1 Pub. 89 - 24/30

Authors : Klyaznik, V., Cand. of Techn. Sc.

Title : Amplifier stage with cathode load

Periodical : Radio 6, 47 - 50, Jun 1955

Abstract : Technical information is given (for radio amateurs) on the structure, voltage transmission, internal resistance, frequency, stability and harmonics characteristics of amplifier cascades (stages) working on cathode loads. The difference between amplifier cascades with cathode loads and cascades with anode loads is explained. Diagrams; graphs.

Institution :

Submitted :

Category : USSR/Radiophysics - Radio-wave reception

I-7

Abs Jour : Ref Zhur - Fizika, No 1, 1957, No 1940

Author : Klyaznik, V.A.

Title : Suppression of Pulse Noise by Compensation Methods

Orig Pub : Elektrosvyaz', 1956, No 8, 25-35

Abstract : Analysis of the influence of pulse noise on a radio receiver containing a system for compensation of the noise after amplitude detection. A simple method is given for improving the method for the purpose of better suppression of the pulse noise. An estimate of the noise rejection is given, taking into account the action of the low-pass filter. A method is indicated whereby it is possible technically to suppress almost all the noise pulse prior to detection.

Card : 1/1

KLICHANIKOV *26*

B

Adhesion of Microscopic Particles to Solid Surfaces in Liquids. (in Russian.) G. I. Fuka, Y. M. Kirichenkov, and E. V. Tsyganova. Doklady Akademii Nauk SSSR (Reports of the Academy of Sciences of the USSR), new ser., v. 68, Mar. 21, 1949, p. 307-310.

The above was investigated for monodispersed suspensions of quartz, glass, graphite, clay, soil, etc., in paraffin, water, mineral oils, and other liquids. The diameter of particles was 0.5-15 μ . Tabulated and charted data indicate that interaction of particles in liquids is determined by their electrokinetic potentials and by peculiarities of their solvate shells.

*See Union Sci. Research Inst. for
Specialty, Agr. Eng. and Inst. Sci.
iment K. K. Rednyski 1948-*

U.S.S.R. METALLURGICAL LITERATURE CLASSIFICATION

FROM STORAGE

CLASSIFIED

RECEIVED

KLYCHEV, S.M.

Change in the vital capacity of the lungs in hypertension.
Zdrav. Turk. 7 no.6:17-19 Je'63. (MIRA 16:8)

1. Iz Nebit-Dagaskoy gorodskoy bol'nitsy (glavnyy vrach S.K. Arazov).

(HYPERTENSION) (LUNGS)

KLYCHEVA, M.Kh. (Moskva)

Weight of present-day clothing and trends in the research on
the means to reduce it. Shvein. prom. no.4:8-12 J1-Ag '55.
(MIRA 18:9)

KLYUCHENKO, N. Y.

"Paleogeography and the Oil-Bearing Possibilities of the Lower
Cretaceous Beds of Central Mangyshlak." p. 187

Geologicheskii sbornik, 3, (Collection of Articles in Geology, Vol. 3),
Leningrad Gosoptekhizdat, 1958, 471pp. (Trudy, vyp 126, Vsesoyuznyy neftyanoy
nauchno-issledovatel'skiy geologorazvedochnyy institut)

KLYCHEVA, N. Yu., Candidate Geolog-Mineralog Sci (diss) -- "The stratigraphy, facies, paleogeography, and oil content of the Lower Cretaceous deposits of central Mangyshlak". Leningrad, 1959, published by VNIIGRI. 15 pp (All-Union Petroleum Sci Res Geological-Prospecting Inst VNIIGRI), 150 copies (KL, No 25, 1959, 129).

KLYCHEVA, N.Yu.; YAKUNITSKAYA, M.I.

Stratigraphy and facies of the Lower Cretaceous sediments
of the Mangyshlak Peninsula. Trudy VNIGRI no.218:301-341
'63. (MIRA 17:3)

KLYCHKOV, P.D.

Determining optimum specific power of a planned tractor train.
Avt.prom. 27 no.11:32-35 N '61. (MIRA 14:10)

1. Tsentral'nyy nauchno-issledovatel'skiy institut mekhaniki
i energetiki.

(Tractor trains)

GAL'PERIN, Z.S.; KLYCHKOV, P.D.; LAKH, Ye.I.; DORBACHEVSKIY, V.A.;
DARAGAN, L.D.; RYZHKOV A.N.; SUKHARNIKOV, I.O.; TURASS,
A.L.; GATSEVICH, V.A., red.

[Manual on automotive transportation of lumber] Spravochnik po lesovoznomu avtomobil'nomu transportu. Moskva, Lesnaya promyshlennost', 1965. 446 p. (MIRA 19:1)

1. Khimki. Tsentral'nyy nauchno-issledovatel'skiy institut mekhanizatsii i energetiki lesnoy promyshlennosti.

LEKSAU, Igor' Nikolayevich; ARODZERO, Aleksandr Mikhaylovich;
GAL'PERIN, Zinoviy Samoylovich; GORBACHEVSKIY, Viktor
Andreyevich; DARAGAN, Leonid Dmitriyevich; KLYCHKOV,
Pavel Dmitriyevich; LAKH, Yevgeniy Ivanovich; PRASOLOV,
Boris Aleksandrovich; RYZHKOV, Aleksey Nikolayevich;
SUKHARNIKOV, Iosif Osipovich; TURASS, Aleksey Leont'yevich;
DOLGOPOLOV, N.P., red.; KONARDOVA, T.F., red. 1zd-va;
VDOVINA, V.M., tekhn. red.

[Manual for the lumber truck driver] Spravochnik shofera
lesovoznogo avtomobila. Moskva, Goslesbumizdat, 1962. 169 p.
(MIRA 15:7)

(Lumber--Transportation)

GORBACHEVSKIY, Viktor Andreyevich; GAL'PERIN, Zinoviy Samoylovich
Gal'perin; KLYCHKOV, Pavel Dmitriyevich; LAKH, Yevgeniy
Ivanovich; LEKSAU, Igor' Nikolayevich; PHASOLOV, Boris
Aleksandrovich; RYZHKOV, Aleksey Nikolayevich; SUKHARNIKOV,
Iosip Osipovich; SHESTAKOV, Boris Aleksandrovich; ALPATSKIY,
I.V., red.; PLESKO, Ye.P., red. 12d-vz; GRECHISNCHIEVA, V.I.,
tekhn. red.

[Utilisation of logging truck transportation] Eksploats-
tsiya lesovoznogo avtomobil'nogo transporta. [By] V.A.
Gorbachevskii i dr. Moskva, Goslesbumizdat, 1962. 296 p.
(MIRA 16:5)

(Lumber--Transportation) (Tractor trains)

ARKHANGEL'SKIY, Yu.A., otv. za vypusk; ATABEKOV, L.P.; GUBIN, S.A.; KLEYKOV, V.S.; KOROTKOV, V.I.; KLYCHKOV, P.F.; LUTSKER, T.D.; LOBACHEV, V.M.; MEKKEL', M.A.; MANUSADZHYANTS, Zh.G.; SIVAKOV, L.F.; KHAYKIN, V.A.; IOFFE, M.L., red.; NIKOLAYEVA, L.N., tekhn. red.

[Safety regulations for truck transportation enterprises] Pravila tekhniki bezopasnosti dlia predpriatii avtomobil'nogo transporta. Moskva, Nauchno-tekhn. izd-vo M-va avtomobil'nogo transp. i shosseynykh dorog RSFSR, 1961. 71 p. (MIRA 14:7)

1. Profsoyus rabotnikov svyazi, raboshikh avtomobil'nogo transporta i shosseynykh dorog. Tsentral'nyy komitet. 2. Tsentral'nyy komitet profsoyusa rabotnikov svyazi raboshikh avtomobil'nogo transporta i shosseynykh dorog (for Arkhangel'skiy). 3. Ministerstvo avtomobil'nogo transporta Kazakhskoi SSR (for Atabekov). 4. Ministerstvo avtomobil'nogo transporta i shosseynykh dorog RSFSR (for Gubin). 5. Moskovskiy avtomobil'no-dorozhnyy tekhnikum (for Kleykov, Korotkov). 6. Mossheldoravtopogruz (for Klychkov). 7. Ministerstvo avtomobil'nogo transporta i shosseynykh dorog USSR (for Lutsker). 8. Tekhnicheskaya inspektaiya Moskovskogo gorodskogo i oblastnogo sovetov profsoyusov (for Lobachev, Mekkel'). 9. Laboratoriya okhrany truda Nauchno-issledovatel'skogo instituta avtomobil'nogo transporta (for Manusadzhants). 10. Ministerstvo avtomobil'nogo transporta i shosseynykh dorog Latvyskoy SSR (for Sivakov). 11. Glavnoye upravleniye gruzovogo avtotransporta Mosgorispolkoma (for Khaykin).
- (Transportation, Automotive—Safety measures)

MUSAYEV, M.R.; KLYCHKOVA, S.N.; MEKHTIYEV, S.D.

Dehydration of saturated alcohols on aluminum oxide. Dokl.
AN Azerb. SSR 20 no.8:27-29 '64. (MIRA 17:12)

1. Institut neftekhimicheskikh protsessov AN AzerSSR im.
Yu.G. Mamedaliyeva.

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69094

S/120/60/000/01/047/051

AUTHORS: Gus'kov, Yu.K., Zvonarev, K.V. and Klychkova, V.P.

E032/E314

TITLE: Preparation of Uranium Layers by Evaporation in Vacuum

PERIODICAL: Pribery i tekhnika eksperimenta, 1960, Nr 1, pp 143 - 144 (USSR)

ABSTRACT: In nuclear physics it is frequently necessary to use specimens having a uranium layer deposited on them. The present authors have developed an evaporator which will work for 50 hours and can produce layers of U_3O_8 30 - 40 μ thick in a single evaporation. Various types of evaporators were tried, most of which did not have a sufficiently long working life. The most successful was that shown schematically in Figure 1. The evaporator consists of two concentric and cylindrical tungsten spirals made of a wire 1 mm in diameter. The spirals end in a cone, as shown and are surrounded by a tantalum screen (3). 4 - 5 g of U_3O_8 could be placed in the evaporator and the rate of evaporation was 10 g/h. The corresponding rate of growth of the U_3O_8 layer was

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E/032/E314

Preparation of Uranium Layers by Evaporation in Vacuo

1 - 1.5 mg/min. The power required was about 1 kW. The evaporation was carried out in a vacuum of 10^{-4} to 10^{-5} mm Hg and provision was made for replacing the U_3O_8 in the spiral without opening up the vacuum chamber. In this way 50 - 80 μ thick layers of U_3O_8 could be obtained without difficulty. The uniformity of the deposit was controlled by measuring the β -activity at various points on the specimen (Damodaran, Ref 1). In Figure 1 the notation is as follows:

- 1) tungsten plate, 5 mm thick; 2) lower screening plate made of tantalum, 0.1 mm thick; 3) tantalum screen, 0.1 mm thick; 4) outer tungsten spiral; 5) tantalum support for the outer spiral, 0.1 mm thick; 6) inner tungsten spiral; 7) tantalum cover 0.5 mm thick supporting the inner spiral; 8) nickel screen, 0.5 mm thick; 9) mica; 10) porcelain tube; 11) nickel disc, 5 mm thick and containing an insert for the specimen; 12) tungsten nut; 13) tungsten rod.

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69094

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Preparation of Uranium Layers by Evaporation in Vacuo

This is an abridged translation.

There are 1 figure and 4 references, 3 of which are Soviet and 1 is English.

SUBMITTED: December 27, 1958

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21.1000,24.6820

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SOV/89-8-1-21/29

AUTHORS: Gus'kov, Yu. K., Zvonarev, A. V., Klychkova, V. P.

TITLE: A Study of Electromotive Forces Generated in Semiconductor Systems Containing Uranium, When Irradiated in Reactors. Letter to the Editor

PERIODICAL: Atomnaya energiya, 1960, Vol 8, Nr 1, pp 72-75 (USSR)

ABSTRACT: It is known on the basis of light, X-ray, γ -ray, β - and α -particle irradiation of hole-electron semiconductor systems that an electromotive force can be generated. The authors investigated the effects of fission particles originating in one member of the system chosen to be a uranium semiconductor compound. One had to be careful to choose a material which will not change appreciably its electrical properties. Semiconductors with a large number of original lattice defects satisfy such a requirement, and, having the choice between the polycrystalline semiconductors and monocrystals with appreciable amount of impurities, the authors preferred the polycrystalline oxide

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A Study of Electromotive Forces Generated
in Semiconductor Systems Containing Uranium,
When Irradiated in Reactors. Letter to the
Editor

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semiconductors. In all experiments U_3O_8 served as the hole semiconductor with a high work function, and for low work function electron semiconductor the authors utilized BaO , TiO_2 , MgO , and Al_2O_3 . Gold and copper were electrodes for U_3O_8 , magnesium, and titan for the electron semiconductor. U_3O_8 - BaO and U_3O_8 - TiO_2 samples were obtained by thermal vacuum evaporation of semiconductor and electrode layers. In the case of U_3O_8 - Al_2O_3 , a layer of Al_2O_3 was sprayed on a titanium base, and then U_3O_8 was evaporated in vacuum, followed by gold or copper. This did not work for MgO , so a ceramic layer of MgO , 0.5-mm thick was taken on which a magnesium electrode on one side, and U_3O_8 with gold or copper on the other side was sprayed. Working surfaces were 6

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A Study of Electromotive Forces Generated
in Semiconductor Systems Containing Uranium,
When Irradiated in Reactors. Letter to the
Editor

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SOV/89-8-1-21/29

and 2.8 cm^2 , and thickness of U_3O_8 , BaO , TiO_2 was 5 to 20μ and that of Al_2O_3 was 100 to 200μ . Samples were held between bronze holders, with cooper-constantan thermocouple on one of them for temperature determination. Finally, the whole combination was enclosed in aluminum containers and irradiated in the experimentally cooled channel of the atomic reactor, with a density of neutrons and γ -rays between 10^{10} to $10^{13} \text{ cm}^{-2} \cdot \text{sec}^{-1}$ (depending on its power level). Sample temperature was approximately 120°C . The authors investigated the emf V_∞ , short-circuit current I_{sc} , load characteristic, surface temperature of the samples, and their resistance R at a potential difference of 1.4 v direct and in reverse. Volt-ampere characteristics were taken before and after exposure. All samples showed presence of an emf. Figure 1 represents the case of $\text{U}_3\text{O}_8\text{-MgO}$.

Card 3/10

A Study of Electromotive Forces Generated
in Semiconductor Systems Containing Uranium,
When Irradiated in Reactors. Letter to the
Editor

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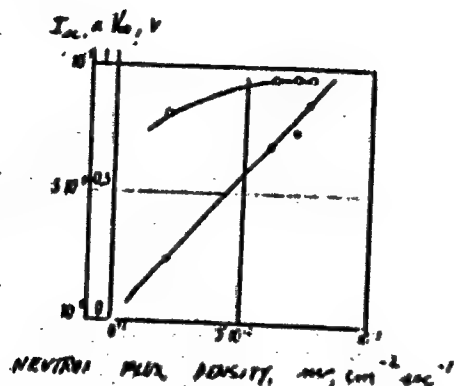


Fig. 1. Emf V_{∞} (o) and current I_{cs} (•) vs neutron flux density nv for an U_3O_8 -MgO sample.

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A Study of Electromotive Forces Generated
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When Irradiated in Reactors. Letter to the
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On Fig. 2 is shown the load characteristic, similar to that of a valve photoelement. Neutron flux density was equal to $8 \cdot 10^{12} \text{ cm}^{-2} \cdot \text{sec}^{-1}$. Figure 3 represents typical volt-ampere characteristics of an $\text{U}_3\text{O}_8\text{-Al}_2\text{O}_3$ sample, before and after exposure. A small valve effect is observable after exposure; during irradiation the rectifying coefficient at 1.4 v was between 2 and 10. Figure 4 shows large variations of all characteristics. Special experiments were performed to check the role of the uranium fission fragments in the emf generation process. Some samples irradiated with γ -rays showed three times weaker effect than in the case of neutron irradiation. This compares favorable with the relative ionization of γ -rays and neutrons. One double sample of $\text{U}_3\text{O}_8\text{-Al}_2\text{O}_3$ was prepared, utilizing on one side a uranium sample 10% enriched in U^{235} while on the other, natural U_3O_8 was used. The

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A Study of Electromotive Forces Generated
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When Irradiated in Reactors. Letter to the
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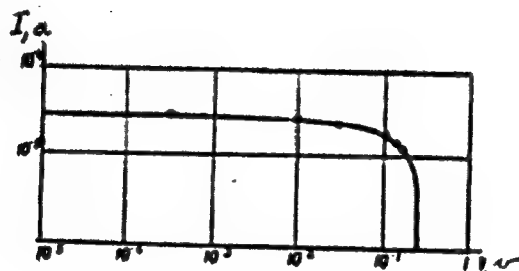
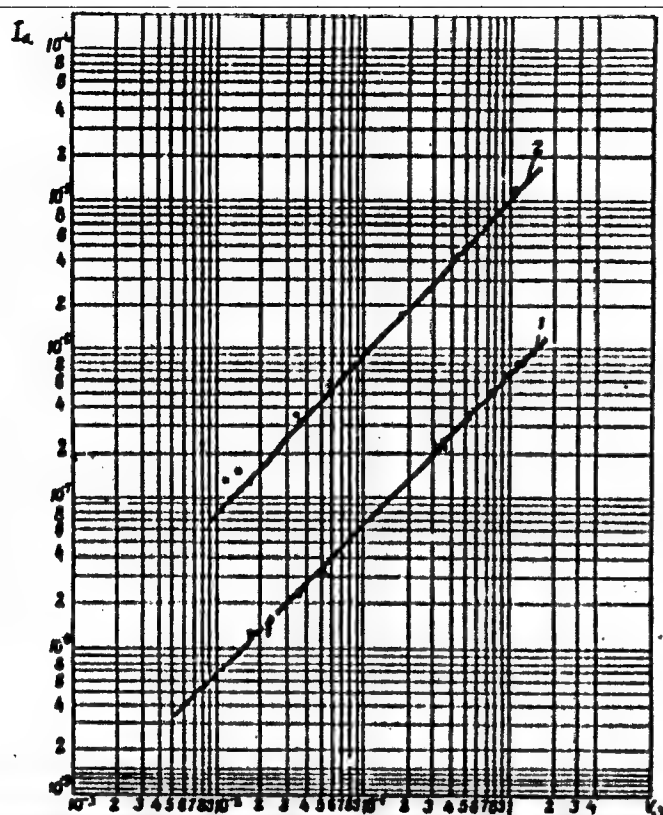


Fig. 2. Load characteristics of an U_3O_8 -MgO sample.

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Fig. 3. Volt-ampere characteristics of the U_3O_8 - Al_2O_3 sample before (curve 1) and after (curve 2) exposure in reactor: ●, negative potential on the titanium electrode; ○, positive potential on the titanium electrode.

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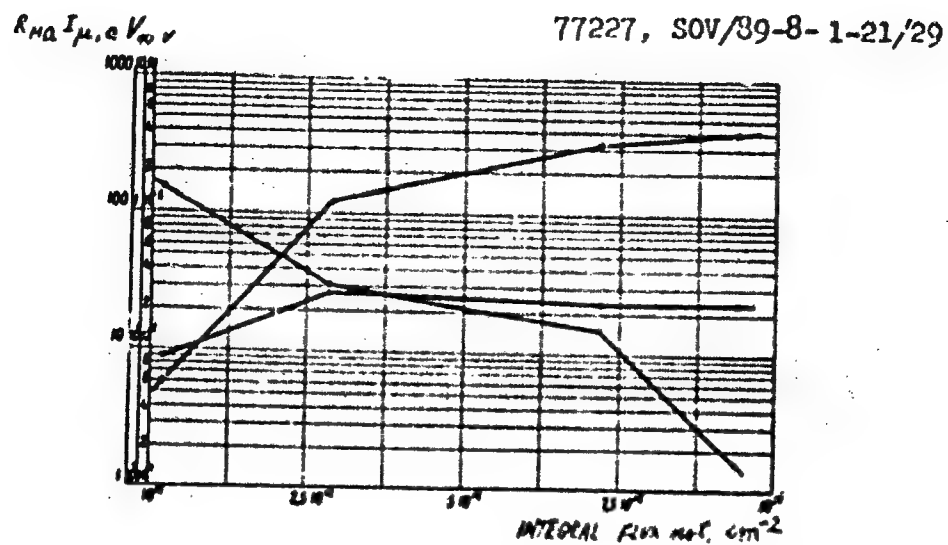


Fig. 4. I_{cs} (x), V_{∞} (o) and γ (•) of an U_3O_8 -MgO sample vs integral neutron flux net at a constant neutron flux density of $8 \cdot 10^{12} cm^{-2} \cdot sec^{-1}$.

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A Study of Electromotive Forces Generated
in Semiconductor Systems Containing Uranium,
When Irradiated in Reactors. Letter to the
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10% enriched sample gave a 15 times larger effect than the natural one. Authors used also oxides and sulfides of Be, Ni, Mo, W, Zn, and Co. In all cases they observed an emf, although the biggest effect occurred with the U_3O_8 -MgO combination. Computation showed that in this last case 0.01% of the fragments' energy was transformed into electrical energy. Such small efficiency can be explained through the apparently short lifetime of the current carriers, and a poor relation between their diffusion path length compared with the sample thickness. The authors conclude that the emf is basically a result of a valve effect, although the volume and thermal emf may play some role too. Professor A. K. Krasin showed interest, G. N. Ushakov collaborated during experiments, and R. G. Bulycheva, V. A. Shalin, and G. V. Rykov were partially involved in experimental work. There are 4 figures; and 6 references, 4 Soviet, 1 U.K., 1 U.S. The U.K. and

Card 9/10

A Study of Electromotive Forces Generated
in Semiconductor Systems Containing Uranium,
When Irradiated in Reactors. Letter to the
Editor

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SOV/89-8-1-21/29

U.S. references are: G. Kinchin, R. Pease, Repts Progr.
Phys., 18, 1 (1955); J. Glen, Advances Phys., 4, Nr 16,
381 (1955).

SUBMITTED: August 3, 1959

Card 10/10

KLYCHMUDAROV, K., (Ashkhabad)

An aul demonstrates. Voen. znan. 42 no.1:21 Ja '66.

(MIRA 19:1)

KLYCHMURADOV, K.

Several times as slow. Voan. znau. 41 no.1:18-19 Ja '65.

(MIRA 18:2)

KLYCHMURADOV, K.

Demonstration and drill is the basis of an exercise. Voen. znani.
40 no.1:24-25 Ja '64. (MIRA 17:4)

GAPUROV, H.; SOTIYEV, M.; KARAYEV, A.; AYDINLIYEV, B.; KLYCHMURADOV, K.;
KHALILYEV, P.; AKADOV, A.

In the land of sands and creation. Voen. zhurn. 1965, 2:26-28 P. 165.

1. Predsedatel' Soveta Ministrov Turkmenской SSR (for Gapurov).
2. Predsedatel' sel'skokhozyaystvennoy arteli "Sovet Turkmenistana" (for Sotiyev).
3. Predsedatel' Leninskogo ispolnitel'nogo komiteta rayonnogo Soveta deputatov trudyashchikhaya Ashkhabada (for Karayev).
4. Nachal'nik Ashkhabadskoy shkoly grazhdanskoy oborony Vsesoyuznogo obshchestva sodeystviya armii, aviatsii i flotu SSSR (for Aydinliyev).
5. Nachal'nik Ashkhabadskikh kursov grazhdanskoy oborony (for Klychmuradov).
6. Komandir mestnogo otzema, predsedatel' kollektiva "Mushk", Turkmenская SSR (for Khalilyev).
7. Boyetskoye spetsial'nogo otzema, grazhdanskoy oborony kollektiva imeni Kalinina Turkmenская SSR (for Akadov).

KLYCHNIKOV, N.

In search of the new, Izobr. i rats. no.10:5-6 0 '58.

(MIRA 11:11)

1. Nachal'nik tsakha kontrol'no-izmeritel'nykh priborov Moskovskogo
shinnogo savoda.

(inventions)

FLYCHENIKOV, M.M.

Apparatus for the automatic measurement of the length, width, and surface area of a moving rubberized cord fabric. Kauch.i rez. 21 no.7:49-51 JI '62. (MIRA 15:7)

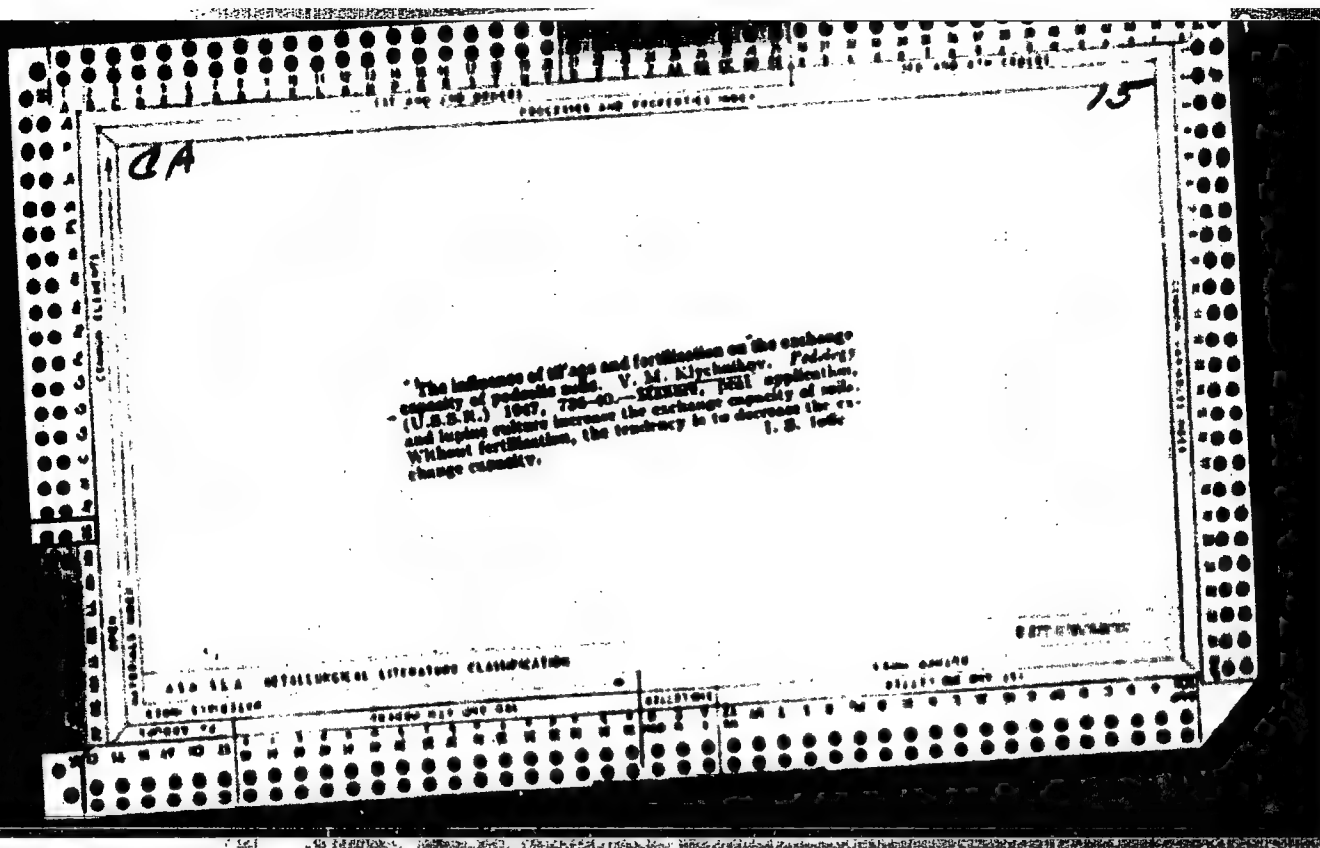
1. Moskovskiy shinnyy zavod.
(Tire fabri s

The use of quinhydrone for investigating soil processes.
V. M. Klyachko, *Voprosy. Akad. Nauk S.S.S.R.*
Nefti, Uglei, Vodni. Ispolneniye. Inst. Khim. i Dredn.
Arkhiv. i Agrokhemizatsiya Gidroliz. Trudy Leningr.
*Obsh. Ucheb. 1940. Pt. 2, 3 22; (Chem. Zentr. 1940, 11,
No. 7.—The use of the quinhydrone electrode for the
determination of the pH of soil suspensions causes an error of 1.5
to 2.0, and in some instances 1.5 to 3.0. The error varies
for different soils, and even for different horizons of the
same soil. In the upper horizon of a natural soil the pH
error may be appreciably increased, in the lower horizons
decreased. An intermediate position is occupied by the
transitional horizons such as the A₁ in podzols and the B
in solonchaks soils. In marshy soils the pH value found is
too low, from the upper horizon down; the more marshy
is the soil the more pronounced is this effect. These errors
are caused by the content of various oxidizing and reducing
substances in the soil which are capable of reacting with
quinhydrone. Where the oxidizing substances exceed the
reducing, the quinhydrone electrode gives too high
values for pH; where the reducing substances prevail, the
values found are too low. In view of this a quinhydrone
electrode can be used for checking the oxidation-reduction
processes in the soil. The pH of a soil is determined not in the
supernatant but in the clear supernatant liquid. In 3%
NaCl exts. the results approach very closely those of a glass
electrode. In a sodium salt the agreement is not quite so
good. In H₂O exts. the oxidizing effect of quinhydrone
should be taken into account. This effect is different from
that in acid. H₂O, for the aq. exts. of soil are more or less
buffered.*

M. Hirsch

2/472 Pri'or dlya onpedeniya dozy izvesti i dlya izucheniya kinetiki protsessu
vzaimotsoystviya pochvy i karbonata. Ka;vtiya trtsy vsesoyuz. Nauch-Issled. In-ta
udobrnii. Agrotekhniki agropochvovedeniya in.gedroytsa. vyp. 29, 1949. o. 212-17

SO: LETOPIS' NO. 35, 1949



CA

2

Adhesion of microscopic particles to solid surfaces in liquids. (1. I. Paba, G. M. Kishchenko, and N. V. Iyppanova (K. K. (b-1188) Inst. Petrolchem. Agrar. and Inst. Sci.) *Doklady Akad. Nauk S.S.S.R.* 66, 207-10 (1960).—With suspensions of 0.5-15- μ particles of quartz, glass, graphite, clay, resin, and surfaces of quartz, glass, metal, or paraffin, plots of the function θ of particles still adhering to the surface after the action of a force F as a function of the ratio F/U , gave, for a definite wt. % of the particles, distribution curves with a peak. If adhesion is characterized by the value F/U , i.e. by the tan of the min. angle at which the particles are detached from the surface (min. coeff. of adhesion, a), and by num. of adhesion on a vertical (γ_v) and on a horizontal surface (γ_h), it is noted that in H_2O the ratio γ_v/γ_h increases with the concn. of electrolyte. The values of a and of γ vary with the medium, the nature and size of the particles and of the solid surface, and the length of the time of contact between the particles and the surface. In H_2O , adhesion

is strongest between hydrophilic (hydrophobic) particles and hydrophilic (hydrophobic) surfaces, weakest between hydrophobic (hydrophobic) particles and hydrophobic (hydrophobic) surfaces; the reverse holds in nonaqueous media (oil). Viscosity of the medium has no direct effect on the adhesion. For quartz on quartz in H_2O , a first falls sharply with increasing concn. of an added electrolyte ($NaCl$, KCl , Na_2CO_3), passes through a min., and then increases rapidly. The curves are, qualitatively, the reverse of the curves of electrokinetic potential. The adhesion on γ_v of quartz is an exponential function of the concn. c of electrolyte, $\gamma_v = h + h \log c$; the coeff. h is approx. const. (2.75-10.0) for solutions of Li, Na, K, Rb, Mg, Ca, and Ba, whereas h increases with decreasing hydration of equiv. ions. With time, a increases, particularly with very fine particles, less so with coarse particles. Up to 60 min., a as a function of the particle size has a min. at medium size, but with increasing time of aging the min. becomes increasingly shallower. The observations point to a preponderant role of the electrokinetic potential and of the particular properties of the solvent envelopes. N. Tsen

KLYCHNIKOV, V. M.

Soil Absorption

Device for determining water permeability of soils under field conditions.
Dokl.Ak.sel'khoz. 16 no. 11, 1951.

9. Monthly List of Russian Accessions, Library of Congress, May 1952, Uncl.

KLYCHNIKOV, V. M.

Soil Absorbtion

Device for determining Water permeability of soil under field conditions.
Pochvovedenie. no. 9, 1952.

9. Monthly List of Russian Accessions, Library of Congress, January 1952, Uncl.

KLYCHNIKOV, V. M.

Fertilizers and Manures

Drill attachment for spreading granulated fertilizer. V. M. Klychnikov,,
Sov. agric., 10, no. 3, 1952.

9. Monthly List of Russian Accessions, Library of Congress, April 1952, Uncl.

USSR / Soil Science. Genesis and Geography of Soils. J-1

Abs Jour: Ref Zhur-Biol., No 8, 1958, 34310.

Author : Kovda, V. A., Hsu Su-Hua; Klyohnikov, V. M.

Inst : Not given.

Title : On Certain Peculiarities of Soil Formation in the
Tidal Zone of the Yellow Sea.

Orig Pub: Pochvovedeniye, 1956, No 8, 12 - 20.

Abstract: According to frequency and duration of flooding, the littoral of the Yellow Sea in China is divided into three sub-zones: zone flooded daily, zone flooded periodically every year, and very rarely flooded zone (once every 10 years). The height of the tides fluctuates from 0.7 to 5 m. Strongly silted marine deposits are prevalent in the first sub-zone, but mineralization of sub-soil waters corresponds to that of the marine (eq. to

Card 1/2

USSR / Soil Science. Genesis and Geography of Soils. J-1

Abs Jour: Ref Zhur-Biol., No 8, 1958, 34310.

Abstract: 48 g/l). In the 2nd sub-zone, as a result of an intensive process of evaporation, mineralization of ground waters reaches 150 g/l, and content of salts in saline soils of the chloride salting reaches 5%. In the third sub-zone, de-salting of soil depressions under the action of rain water is being observed. In this sub-zone, the most frequent soils are as follows: meadowy slightly alkali, muddy- and meadow- swampy. Agricultural utilization of flooded areas is possible only with construction of protective dams, deep drainage by means of floodgates for protection from sea tides and erosion by water. -- S. A. Nikitin.

Card 2/2

3

Soil Science - Genesis and Geography of Soils.

J.

APPROVED FOR RELEASE: 06/19/2000, CIA-RDP86-00513R000723310001-4

Author : Sung Ta-ch'eng; Vlasuk, I.A., Klychnikov, V.M., Hsi Wang-
lin
Inst :
Title : The Soils of the "Dzushba" Goskhoz of the Chinese People's
Republic.
Orig Pub : Tekhnovedeniye, 1957, No 1, 26-36.
Abstract : The territory of the "Dzushba" goskhoz lies on the second
terraced slope the bottom lands of the Sungari River. The
ground water is at a depth of 1.5-3 to 5 meters, and on
saline areas it is slightly mineralized -- up to 1.3 gram/
liter of solid deposit. There is 550-600 mm. of precipita-
tion yearly. On elevated areas there are chernozem-like
soils; on wooded areas the soils are podsolized and loa-
ched. The humus content of the upper soil horizons reaches
11.5%; the reaction is neutral; of the absorbed bases Ca

Card 1/2

KLICHNIKOV, V.M., kand. sel'skokhoz. nauk

Agrochemical servicing of collective and state farms.
Zemledelie 25 no.11:79-87 N '63. (MIRA 17:2)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut udobreniy
i agropochvovedeniya.

KLYCHNIKOV, V.M., kand. sel'khoz. nauk; GOMENYUK, L.I., red.

[Agrochemical services in agriculture] Agrokhimicheskaya
sluzhba v sel'skom khoziaistve. Moskva, Kolos, 1964. 183 p.
(MIRA 18:2)

KLYCHNIKOV, V.M., kand. sel'skokhoz. nauk; ORLOVA, A.N.

Automation of continuous lines in the analysis of soil.
Zhur.VKHG 10 no.4:428-433 '65.

(MIRA 18:11)

ZHADAN, V.S., kand. tekhn. nauk; KLYCHNIKOVA, L.V., inzh.; BORTSOVA,
L.A., inzh.

Development of the parameters of industrial air conditioning.
Khol. tekhn. i tekhn. no.1:111-115 '65. (MIRA 18:9)

KLYCHNIKOVA, Z. I.

"Intonation as means for junction of parts of composed sentences."

report submitted for 5th Intl Cong of Phonetic Sciences, Muenster, W. Germany,
16-23 Aug 64.

KLYDZHEV, K. O.

Viticulture-Azerbaijan

For further increase in vineyard yield.. Vin. SSSR. 13, No. 3, 1953.

Monthly List of Russian Accessions, Library of Congress, June 1953. UNCLASSIFIED.

KLEYMAN, Ye.A.; KATYUZHANSKIY, G.A.

"Mathematical statistics in engineering" by A.M.Dlin. Reviewed
by E.A.Kleiman, G.A.Kotuzhanskii. Standartizatsiia 25 no.12:55-
56 D '61. (MIRA 14:11)

(Mathematical statistics)
(Mechanical engineering)
(Dlin, A.M.)

L 45244-66 EWT(I)/EWT(M)/ENP(I)/ETI LJP(c) JD/LWD
ACC NR: AR8025784 SOURCE CODE: UR/0058/66/000/004/E060/E060

AUTHOR: Inyutkin, A. I. ; Klyeshchinskiy, L. I.

3/
8

ORG: none

TITLE: The determination of temperature characteristics, linear expansion coefficients and dynamic deviation amplitudes in lead chalcogenides by the x-ray diffraction method

SOURCE: Ref. zh. Fizika, Abs. 4E463

REF SOURCE: Sb. Issled. po matem. i eksperim. fiz. i mekhan. L., 1965, 145-147

TOPIC TAGS: temperature characteristic , linear expansion coefficient, x ray diffraction, chalcogenide, lead chalcogenide, lead sulfide, lead selenide, lead telluride
27 27 27

ABSTRACT: The study of the x-ray diffraction patterns of PbS, PbSe, and PbTe obtained by the Debye Scherrer Method at 293 and 169K, was used for determining

Cord 1/2

L 45244-66

ACC NR: AR6025784

the temperature characteristics ($200 \pm 15^\circ$, $150 \pm 15^\circ$, $130 \pm 15^\circ$), dynamic
deviation amplitudes (0.163 and 0.128; 0.199 and 0.151; 0.212 and 0.161 at 193 and
169K, respectively), and linear expansion coefficients ($16 \cdot 10^{-6}$, $20 \cdot 10^{-6}$, $22 \cdot 10^{-6}$
degrees⁻¹). [Translation of abstract] [FM]

SUB CODE: 20/

Card 2/2 ZC

KLIOA, L.P., kandidat meditsinskikh nauk.

Study of the mineral salt content of standard food rations in hospitals and methods of improving hospital diet. Trudy LSOMI 14:127-143 '53. (MLRA 7:9)
(Hospitals--Food service) (Minerals in food)

"APPROVED FOR RELEASE: 06/19/2000

CIA-RDP86-00513R000723310001-4

APPROVED FOR RELEASE: 06/19/2000

CIA-RDP86-00513R000723310001-4"

КЛЮГА, Любовь Петровна.

**[Hygiene of the collective farm market] Gigienna kolhoznoye rynka.
Leningrad, Medgiz, 1955. 86 p. (MLA 9:6)
(FOOD ADULTERATION AND INSPECTION)**

KLYGA, L.P.

**First hygienic investigations of hospital nutrition in Russia,
Trudy LSGMI 25:79-87 '55. (MIRA 12:8)**

**1. Kafedra gigiyeny pitaniya Leningradskogo sanitarno-
gigiyenicheskogo meditsinskogo instituta (sav. kafedroy-
detsent Z.M.Agranovskiy).**

(HOSPITALS,

food serv., hist. in Russia (Rus))

(NUTRITION, history,

hosp. food serv. in Russia (Rus))

GESSEN, A.I.; ILYUA, L.P.; KHARAKHORKINA, X.D.; CHISTYAKOVA, A.M.

Hygienic characteristics of nutrition at trade schools. Trudy
LSGMI 31:129-144 '56. (MIRA 12:8)

1. Kafedra gigiyeny pitaniya Leningradskogo sanitarno-
gigiyenicheskogo meditsinskogo instituta (sav.kafedroy -
dets. Z.M.Agranovskiy).

(SCHOOLS,

trade schools, nutrition (Rus))

(NUTRITION,

in trade schools (Rus))

KLYOA, L.P.

N.I.Pirogov's views on nutrition of patients. Vop.vit. 16 no.3:
65-67 My-Je '57. (MLRA 10:10)

1. Is kafedry gigiyeny pitaniya (zav. - dotsent Z.M.Agranovskiy)
Leningradskogo sanitarno-gigiyenicheskogo meditsinskogo instituta
(BIOGRAPHIES,

Pirogov, N.I. (Rus))

(DIETS, in various diseases,
contribution of N.I.Pirogov (Rus))

KLIMA, L.P.

Problems of nutrition in the works of A.P.Dobroslavin (1842-1889). Zhur.ob.biol. 20 no.2:87-89 Mr-Apr '59. (MIRA 12:5)

1. Iz kafedry gigiyeny pitaniya (sav. - dots. Z.N.Agranovskiy) Leningradskogo sanitarno-gigiyenicheskogo meditsinskogo instituta.

(BIOGRAPHIES,

Dobroslavin, A.P. (Rus))

KLYGA, L.P.

Food salt content in children's hospitals. Trudy LSOMI
no.47:148-154 '59. (MIRA 12:9)

1. Kafedra gigiyeny pitaniya Leningradskogo sanitarno-gigiyenicheskogo meditsinskogo instituta (sav.kafedroy - dotsent Z.N.Agranovskiy).

(HOSPITAL FOOD SERVICE)
(SODIUM CHLORIDE)

KLYQA, L.P., detsent

History of sanitation in Vladivostok. Oig. 1 san. 26 no.2:38-43
F '61. (MIRA 14:10)

1. Is kafedry gigiyeny Vladivostokskogo meditsinskogo instituta.
(VLADIVOSTOK--SANITATION)

KLYGA, L.P., dotsent

Tasks of hygienic research in fisheries of the Far East. Biul.
Uch. med. sov. 3 no.3:20-23 My-Je '62. (MIRA 17:10)

with bottom half of insert facing p. 24

TOPIC TAGS: anisotropy, metal physical property, metal mechanical property, defect

"APPROVED FOR RELEASE: 06/19/2000

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APPROVED FOR RELEASE: 06/19/2000

CIA-RDP86-00513R000723310001-4"

"APPROVED FOR RELEASE: 06/19/2000

CIA-RDP86-00513R000723310001-4

ASSOCIATION: none

APPROVED FOR RELEASE: 06/19/2000

CIA-RDP86-00513R000723310001-4"

AUTHORS:

Klygin, A. Ye., Kolyada, N. S.

SOV/78-3-12-26/36

TITLE:

Investigation of the System Uranyl Nitrate - 8-Oxyquinoline - Water by the Solubility Method (Izucheniye sistemy uranil-nitrat - 8-oksikhinolin - voda metodom rastvorimosti)

PERIODICAL:

Zhurnal neorganicheskoy khimii, 1958, Vol 3, Nr 12, pp 2767-2770 (USSR)

ABSTRACT:

The dissociation constants of 8-oxyquinoline and the solubility of uranyl 8-oxyquinoline were investigated. The solubility of 8-oxyquinoline is dependent upon the pH value for the solution. It increases with a decrease in the pH of the solution. For the dissociation constants K_1 and K_2 the following values were found:

$$K_1 = \frac{[H^+][HR]}{[H_2R^+]} = 8.66 \cdot 10^{-6} \text{ and } K_2 = \frac{[H^+][R^-]}{[HR]} = 1.76 \cdot 10^{-10}$$

The average value for the concentration of the undissociated molecules of 8-oxyquinoline is $4.46 \cdot 10^{-3}$ moles/l. The solubility product for uranyl 8-oxyquinoline ($UO_2R_2 \cdot HR$) was found by determining the solubility in solutions of varying pH values. P was found to have the following values at 25°C:

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Investigation of the System Uranyl Nitrate - 8-Oxyquinoline - Water by the
Solubility Method

SOV/78-3-12-26/36

$$P = [UO_2^{2+}] [R^-]^2 [HR] = (1.9 \pm 0.5) \cdot 10^{-29}$$

There are 2 tables and 9 references, 7 of which are Soviet.

SUBMITTED:

September 5, 1957

Card 2/2

5(4), 21(1)

SOV/78-4-1-9/48

AUTHORS:

Klygin, A. Ye., Smirnova, I. D.

TITLE:

On the Instability Constant of the $\text{UO}_2(\text{CO}_3)_3^{4-}$ Ion (O konstanta nestoykosti iona $\text{UO}_2(\text{CO}_3)_3^{4-}$)

PERIODICAL:

Zhurnal neorganicheskoy khimii, 1959, Vol 4, Nr 1, pp 42-45 (USSR)

ABSTRACT:

A direct determination of the dissociation constant of $\text{UO}_2(\text{CO}_3)_3^{4-}$ was carried out by the solubility method. Uranyl oxyquinolate was used as solid phase. On reciprocal action of uranyl oxyquinolate and alkali and ammonium carbonate solutions the complex $\text{UO}_2(\text{CO}_3)_3^{4-}$ is formed. The stability constant of $\text{UO}_2(\text{CO}_3)_3^{4-}$ was calculated at 25° and $\mu = 1.0$.

$$K = \frac{[\text{UO}_2^{2+}][\text{CO}_3^{2-}]^3}{[\text{UO}_2(\text{CO}_3)_3^{4-}]} = (1.7 \pm 0.6) \cdot 10^{-23} \text{ at } 25^\circ$$

μ = ionic strength

There are 1 figure, 1 table, and 14 references, 11 of which are Soviet.

Card 1/2

5(4), 21(1)

AUTHORS:

Klygin, A. Ye., Kolyada, N. S.

SOV/78-4-1-45/48

TITLE:

The Examination of the System $\text{UO}_2\text{SO}_3-(\text{NH}_4)_2\text{SO}_3-\text{H}_2\text{O}$ by the Solubility Method (Issledovaniye sistemy $\text{UO}_2\text{SO}_3-(\text{NH}_4)_2\text{SO}_3-\text{H}_2\text{O}$ metodom rastvorimosti)

PERIODICAL:

Zhurnal neorganicheskoy khimii, 1959, Vol 4, Nr. 1, pp 239-242 (USSR)

ABSTRACT:

The solution products of UO_2SO_3 and the composition and stability constant of the complex compound which is formed from the interaction of uranyl sulfite and ammonium sulfite solution was investigated. The production of uranyl sulfite was carried out by the method of Kohlschuetter (Ref 1). Thermograms were plotted with the uranyl sulfite produced ($\text{UO}_2\text{SO}_3 \cdot 4.5\text{H}_2\text{O}$). The thermogram shows three endothermic effects: in the temperature ranges from 50 to 90°, 105 to 135°, and 170 to 210°C. An exothermic effect appears at 210-320°C. The solubility-iso-therm of the system $\text{UO}_2\text{SO}_3-(\text{NH}_4)_2\text{SO}_3-\text{H}_2\text{O}$ was examined at 25°. It can be seen from the results that the solubility of UO_2SO_3

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The Examination of the System $\text{UO}_2\text{SO}_3-(\text{NH}_4)_2\text{SO}_3-\text{H}_2\text{O}$ by the Solubility Method

in ammonium sulfite solutions decreases with an increase of the concentration of ammonium sulfite and reaches a minimum with a concentration of ammonium sulfite of $6.24 \cdot 10^{-2}$ mol/l. The solubility increases with higher concentrations of ammonium sulfite and complex formation takes place. The solubility product is $P = [\text{UO}_2^{2+}][\text{SO}_3^{2-}] = 2.56 \cdot 10^{-9}$. The mean value of the stability constant is

$$K_H = \frac{[\text{UO}_2^{2+}][\text{SO}_3^{2-}]^2}{[\text{UO}_2(\text{SO}_3)_2^{2-}]} = 7.92 \cdot 10^{-8}.$$

The thermogram was plotted by Ye. F. Goryunov with the aid of the N. S. Kurnakov pyrograph. There are 1 figure, 2 tables, and 8 references 4 of which are Soviet.

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